

REMARKS/ARGUMENTS

Claims 1-19 are pending in the captioned application and stand rejected under 35 U.S.C. §103(a) as being unpatentable over Li et al. (US 5,288,763) in combination with Matyjaszewski et al. (US 5,763,548). Applicants respectfully request reconsideration and allowance of these claims in view of the following comments.

Li et al. teach processes for preparing porous, polymer particles based on a template polymerization technique followed by removal of the template polymer from the particles. The Examiner states that although Li et al. do not positively teach the template macromolecules can initiate polymerization, the reaction can start without any initiator (i.e. benzoyl peroxide, column 4, line 65). The Examiner thus is of the opinion that the template macromolecule itself initiates a polymerization (page 4, lines 1-2 of Office action).

Applicants submit that Li et al. do not support the Examiner's opinion that "template macromolecule itself initiates a polymerization". Li et al. state that polymerization can proceed at elevated temperature in the presence or absence of a catalyst (i.e. initiator). They further state that lower temperatures can be employed if high energy radiation is applied to initiate polymerization (see Li et al., paragraph bridging columns 4 and 5). Applicants submit that it is well understood that polymerization starts because of some trigger (i.e. initiator). Therefore, Applicants submit that the Examiner's

assumption that the template macromolecule itself initiates a polymerization is not supported by Li et al.

With regard to claim 1, Applicants submit that Li et al. fail to teach the use of a degradable initiator, or a transition metal catalyst, or a ligand to the transition metal catalyst.

Matyjaszewski et al. teach a radical polymerization method based on atom transfer radical polymerization (ATRP), which provides a high degree of control over the polymerization process. The Examiner states that because Matyjaszewski et al.'s polymers have a very narrow molecular weight distribution (MWD), it would be obvious to use Matyjaszewski et al.'s initiator in Li et al.'s process to obtain narrow MWD, and therefore, uniform pores in the final chromatographic support. Applicants respectfully disagree.

Applicants submit that Matyjaszewski et al. teach a process for making monodisperse particles, not particles with multimodal pore structure. While Matyjaszewski et al. give a narrow distribution of the MW of the polymer (one of the advantages of ATRP), it would not necessarily result in a narrow pore size distribution. Applicants submit that even if one were to use Matyjaszewski et al.'s initiator in Li et al.'s process to obtain narrow MWD polymer, the pore sizes would still be dependent on the template.

Applicants submit that even if the references are combined, i.e. apply ATRP directly to Li et al., the combination would not teach the current method as in claim 1. As


discussed above, none of the references teach or disclose the inclusion of a degradable initiator, which is degraded after polymerization to produce a secondary pore structure.

Applicants submit that claim 1 is patentable over the combination of Li et al. and Matyjaszewski et al. Claims 2-19 are dependent claims depending upon claim 1, is therefore also patentable over the combination.

Early and favorable consideration is respectfully requested.

Respectfully submitted,


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